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09/664,941	09/19/2000	Kuo-Chun Lee	CREO.005US0	5234	
25242 75	590 11/18/2003		EXAMI	EXAMINER	
VICTOR H. OKUMOTO			MASKULINSKI	MASKULINSKI, MICHAEL C	
P.O. BOX 6120 FREMONT, CA 94538			ART UNIT	PAPER NUMBER	
TREMOTIT, C	11 7.000		2184	11	
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Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)				
	09/664,941	LEE ET AL.				
Office Action Summary	Examiner	Art Unit				
	Michael C Maskulinski	2184				
The MAILING DATE of this communication ap Period for Reply	pears on the cover sheet with the c	orrespondence address				
A SHORTENED STATUTORY PERIOD FOR REPL THE MAILING DATE OF THIS COMMUNICATION. - Extensions of time may be available under the provisions of 37 CFR 1. after SIX (6) MONTHS from the mailing date of this communication. - If the period for reply specified above is less than thirty (30) days, a repless of the period for reply is specified above, the maximum statutory period. Failure to reply within the set or extended period for reply will, by statut. - Any reply received by the Office later than three months after the mailing earned patent term adjustment. See 37 CFR 1.704(b). Status	136(a). In no event, however, may a reply be timely within the statutory minimum of thirty (30) day will apply and will expire SIX (6) MONTHS from e. cause the application to become ABANDONE	nely filed s will be considered timely. the mailing date of this communication. D (35 U.S.C. § 133).				
1) Responsive to communication(s) filed on 25.5	September 2003.					
2a)⊠ This action is FINAL . 2b)□ This	action is non-final.					
3) Since this application is in condition for allowated closed in accordance with the practice under						
Disposition of Claims						
4) ☐ Claim(s) 1-37 is/are pending in the application 4a) Of the above claim(s) 4 and 32-37 is/are w 5) ☐ Claim(s) is/are allowed. 6) ☐ Claim(s) 1-3 and 5-31 is/are rejected. 7) ☐ Claim(s) is/are objected to. 8) ☐ Claim(s) are subject to restriction and/o	vithdrawn from consideration.					
Application Papers						
9) The specification is objected to by the Examination The drawing(s) filed on is/are: a) acceptable		- - - - - -				
Applicant may not request that any objection to the						
Replacement drawing sheet(s) including the correct		, ,				
11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.						
Priority under 35 U.S.C. §§ 119 and 120						
12) Acknowledgment is made of a claim for foreign a) All b) Some * c) None of: 1. Certified copies of the priority document 2. Certified copies of the priority documents. Copies of the certified copies of the priority documents. See the attached detailed Office action for a list 13) Acknowledgment is made of a claim for domest since a specific reference was included in the firm 37 CFR 1.78. a) The translation of the foreign language prints.	ts have been received. ts have been received in Applicationity documents have been received in (PCT Rule 17.2(a)). t of the certified copies not received priority under 35 U.S.C. § 119(exist sentence of the specification or covisional application has been received priority under 35 U.S.C. §§ 120	on No ed in this National Stage ed. e) (to a provisional application) in an Application Data Sheet. eived. and/or 121 since a specific				
reference was included in the first sentence of the specification or in an Application Data Sheet 37 CFR 1.78.						
Attachment(s)		ADEEM IOBAL				
Notice of References Cited (PTO-892)	5) 🔲 Notice of Informal P	作 河中で、及ればい医院)。 atent Application (PTO-152)				

Art Unit: 2184

Final Office Action

Claim Objections

1. Claims 7, 8, 12 and 13 are objected to because of the following informalities: these claims contain steps (f) and (g) which are different than steps (f) and (g) in independent claims 1 and 9. The Examiner believes that the steps in claims 7, 8, 12, and 13 should start with the designation (h) and end with the designation (k) and has interpreted these claims as such. Appropriate correction is required.

Claim Rejections - 35 USC § 102

- 2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
- 3. Claims 22-24 and 28-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Cardoza et al., U.S. Patent 5,630,049.

Referring to claims 22 and 28:

- a. In column 10, lines 12-17, Cardoza et al. disclose that an Ethernet network connection may be used between a host and target computer system (establishing a connection between a client computer and a server computer over the Internet).
- b. In column 12, lines 35-45, Cardoza et al. disclose initializing through sending a message using a remote debugger on the host computer (receiving a request from a debug program of said server computer).
- c. In column 12, lines 35-45, Cardoza et al. disclose that the target computer system may then respond to the initializing by sending a reply message with

Art Unit: 2184

target system initialization information that is necessary for remote debugging (causing an application program of said client computer to generate a response to said request).

- d. In column 10, lines 56-67 continued in column 11, lines 1-11, Cardoza et al. disclose a polling mode and an interrupt-driven mode for the target computer system (transmitting an indication of said response back to said debug program).
- e. In column 2, lines 42-67, Cardoza et al. teaches repeating the steps multiple times so as to run said application program through a diagnostic sequence.

Referring to claims 23 and 29, in the Abstract, Cardoza et al. disclose that user input, in the form of debug commands, is received using a remote debugger in the first computer system to control the remote debugging session (said diagnostic sequence is provided to said debug program by a user of said of said server computer).

Referring to claims 24 and 30, in column 2, lines 53-55, Cardoza et al. disclose issuing to the software debugger a debug command that indicates a function to be performed by the target computer system (said diagnostic sequence is preprogrammed into said debug program).

Claim Rejections - 35 USC § 103

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Art Unit: 2184

5. Claims 1-3, 5, 6, and 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cardoza et al., U.S. Patent 5,630,049, and further in view of Blaisdell et al., U.S. Patent 6,357,019 B1.

Referring to claims 1 and 9:

In column 18, lines 61-64, Cardoza et al. disclose that in a preferred a. implementation, the target operating system is booted and remains in polling mode waiting for messages from the host computer system to establish a network connection. However, Cardoza et al. don't explicitly disclose detecting a debug request initiated by a user of a client computer that is transmitted to a server computer over the Internet. In column 2, lines 59-67 continued in column 3, lines 1-4, Blaisdell et al. disclose that the invention enables a networked computer's problems to be investigated by specialized agents that are loaded onto the failing system over a network after the failure appears. These agents are then capable of interacting with the failing system to enable a remote user to obtain enough information to diagnose the problem. Further, in column 3, lines 10-13, Blaisdell et al. disclose that the invention has the ability to have a large set of highly specialized "agents" that are each capable of dealing with separate parts of the product, that can be selected and downloaded based on the symptoms of the problem. In Figure 2, Blaisdell et al. disclose that this is done over the Internet. It would have been obvious to one of ordinary skill at the time of the invention to include the detecting a debug request initiated by a user of a client computer that is transmitted to a server computer over the Internet of

Art Unit: 2184

Blaisdell et al. into the system of Cardoza et al. A person of ordinary skill in the art would have been motivated to make the modification because it allows the user to gather information about a problem on an object-oriented computer operating system connected to a network without having to force the system to be rebooted and a different version of the operating system installed prior to diagnosing the problem (see Blaisdell et al.: column 1, lines 56-65).

- b. In column 10, lines 12-17, Cardoza et al. disclose that an Ethernet network connection may be used between a host and target computer system (establishing a connection between a client computer and a server computer over the Internet).
- c. In column 12, lines 35-45, Cardoza et al. disclose initializing through sending a message using a remote debugger on the host computer (receiving a request from a debug program of said server computer).
- d. In column 12, lines 35-45, Cardoza et al. disclose that the target computer system may then respond to the initializing by sending a reply message with target system initialization information that is necessary for remote debugging (causing an application program of said client computer to generate a response to said request).
- e. In column 10, lines 56-67 continued in column 11, lines 1-11, Cardoza et al. disclose a polling mode and an interrupt-driven mode for the target computer system (transmitting an indication of said response back to said debug program).

Art Unit: 2184

f. In column 2, lines 42-67, Cardoza et al. teaches repeating the steps multiple times so as to run said application program through a diagnostic sequence.

Referring to claims 2 and 10, in the Abstract, Cardoza et al. disclose that user input, in the form of debug commands, is received using a remote debugger in the first computer system to control the remote debugging session (said diagnostic sequence is provided to said debug program by a user of said of said server computer).

Referring to claims 3 and 11, in column 2, lines 53-55, Cardoza et al. disclose issuing to the software debugger a debug command that indicates a function to be performed by the target computer system (said diagnostic sequence is preprogrammed into said debug program).

Referring to claim 5, in column 21, lines 59-62, Cardoza et al. disclose that in order to maintain and operate a user debugging session to test the target operating system, information that describes the software being tested may reside on either the host or target system (transmitting identifications of said application program to said server computer). In column 20, lines 56-60, Cardoza et al. disclose that information about the target computer system, such as an incarnation number and the address locations of certain executable code images comprising operating system code, may comprise the RESP_INIT message (transmitting identifications of said client computer to said server computer).

Referring to claim 6, in column 20, lines 66-67 continued in column 21, lines 1-9, Cardoza et al. disclose that the use of a particular password for remote debugging in

Art Unit: 2184

the target computer system is illustrative of a general security mechanism to authorize a network connection between two computer systems. Implementations may include other security mechanisms employing both an account and password, for example (transmitting a user identification and a password provided by a user of said client computer to said server computer).

6. Claims 7, 8, 12, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Cardoza et al., U.S. Patent 5,630,049 and Blaisdell et al., U.S. Patent 6,357,019 B1, and further in view of Schauser, U.S. Patent 6,331,855 B1.

Referring to claims 7 and 12:

f. In column 11, lines 37-62, Cardoza et al. disclose that the target computer system may be in an infinite programming loop continuously executing a series of instructions (running of said preprogrammed diagnostic sequence). A user on the host computer system entering commands at a remote debugging session connected to the target computer system may observe the infinite loop execution and interrupts it (the preprogrammed diagnostic sequence is paused by a user of said server computer and control of said debug program is transferred to said user of said server computer). Further, in column 22, lines 30-32, Cardoza et al. disclose the STEP command, which is a user debug command which allows a user to single step through source code being tested on the target computer system (receiving a request initiated by said user of said server computer).

Art Unit: 2184

g. In column 22, lines 34-37, Cardoza et al. disclose that the remote debugger tells the target operating system to execute a series of machine instructions that correspond to the single source code statement (causing said application program to respond to said request).

In column 5, lines 3-60, Cardoza et al. disclose messages sent between the host and target computers. However, Cardoza et al. don't explicitly disclose generating a graphics file including pixel information for a graphics image displayed on a display screen of said client computer and automatically transmitting said graphics file to said server computer so that said graphics image is displayed on a display screen of said server computer. In column 2, lines 31-44, Schauser discloses that the present invention is a system and method for controlling information displayed on a first processor-based system. The system comprises a memory to store instruction sequences by which the second processor-based system is processed, and a processor coupled to the memory. The stored instruction sequences cause the processor to: (a) examine, at predetermined interval, a location of a currently displayed image; (b) compare the location with a corresponding location of a previously displayed image to determine if the previously displayed image has changed; (c) transmitting location information representing the change; and (d) storing the changed information on the first processor-based system. It would have been obvious to one of ordinary skill at the time of the invention to include the display device of Schauser into the combined system of Cardoza et al. and Blaisdell et al. A

Art Unit: 2184

person of ordinary skill in the art would have been motivated to make the modification because remote desktop access technology allows a user to control a remote computer as if sitting right in front of it. The user can run applications, access files, change configurations, or debug problems. There are many different uses for such technology, including providing technical support, telecommuting, collaboration, education and training, equipment control, software and computer rental, software demonstration, sales presentations, and access from mobile handheld devices (see Schauser: column 1, lines 15-23).

Referring to claims 8 and 13, In column 2, lines 42-67, Cardoza et al. teaches repeating the steps multiple times so as to run said application program through a diagnostic sequence.

7. Claims 14-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cardoza et al., U.S. Patent 5,630,049, and further in view of Schauser, U.S. Patent 6,331,855 B1.

Referring to claims 14 and 20:

- a. In column 10, lines 12-17, Cardoza et al. disclose that an Ethernet network connection may be used between a host and target computer system (establishing a connection between a client computer and a server computer over the Internet).
- b. In column 12, lines 35-45, Cardoza et al. disclose initializing through sending a message using a remote debugger on the host computer (receiving a request from a debug program of said server computer).

Art Unit: 2184

c. In column 12, lines 35-45, Cardoza et al. disclose that the target computer system may then respond to the initializing by sending a reply message with target system initialization information that is necessary for remote debugging (causing an application program of said client computer to generate a response to said request).

d., e. In column 5, lines 3-60, Cardoza et al. disclose messages sent between the host and target computers. However, Cardoza et al. don't explicitly disclose generating a graphics file including pixel information for a graphics image displayed on a display screen of said client computer and automatically transmitting said graphics file to said server computer so that said graphics image is displayed on a display screen of said server computer. In column 2, lines 31-44, Schauser discloses that the present invention is a system and method for controlling information displayed on a first processor-based system. The system comprises a memory to store instruction sequences by which the second processor-based system is processed, and a processor coupled to the memory. The stored instruction sequences cause the processor to: (a) examine, at predetermined interval, a location of a currently displayed image; (b) compare the location with a corresponding location of a previously displayed image to determine if the previously displayed image has changed; (c) transmitting location information representing the change; and (d) storing the changed information on the first processor-based system. It would have been obvious to one of ordinary skill at the time of the invention to include the display device of

Art Unit: 2184

Schauser into the combined system of Cardoza et al. and Blaisdell et al. A person of ordinary skill in the art would have been motivated to make the modification because remote desktop access technology allows a user to control a remote computer as if sitting right in front of it. The user can run applications, access files, change configurations, or debug problems. There are many different uses for such technology, including providing technical support, telecommuting, collaboration, education and training, equipment control, software and computer rental, software demonstration, sales presentations, and access from mobile handheld devices (see Schauser: column 1, lines 15-23)

Referring to claim 15, the combination of Schauser and Cardoza et al. teaches a visual interface for debugging applications. However, the combination of Schauser and Cardoza et al. doesn't explicitly teach that the graphics file is in a GIF, JPEG, or TIF graphics file. The Examiner takes Official Notice that in the art of computer visual displays, it is obvious to use a graphics file such as a GIF, JPEG, or TIF graphics file. An example of this is clipart, Internet pictures, and scanned pictures. It would have been obvious to one of ordinary skill at the time of the invention to include the GIF, JPEG, or TIF graphics file into the combined system of Schauser and Cardoza et al. A person of ordinary skill in the art would have been motivated to make the modification because Schauser teaches images displayed with pixels, which can be in a GIF, JPEG, or TIF graphics file format.

Referring to claims 16 and 21, in column 18, lines 61-64, Cardoza et al. disclose that in a preferred implementation, the target operating system is booted and remains in

Art Unit: 2184

polling mode waiting for messages from the host computer system to establish a network connection (detecting a debug request initiated by a user of said client computer).

Referring to claim 17, in column 2, lines 42-67, Cardoza et al. teaches repeating the steps multiple times so as to run said application program through a diagnostic sequence.

Referring to claim 18, in column 21, lines 59-62, Cardoza et al. disclose that in order to maintain and operate a user debugging session to test the target operating system, information that describes the software being tested may reside on either the host or target system (transmitting identifications of said application program to said server computer). In column 20, lines 56-60, Cardoza et al. disclose that information about the target computer system, such as an incarnation number and the address locations of certain executable code images comprising operating system code, may comprise the RESP_INIT message (transmitting identifications of said client computer to said server computer).

Referring to claim 19, in column 20, lines 66-67 continued in column 21, lines 1-9, Cardoza et al. disclose that the use of a particular password for remote debugging in the target computer system is illustrative of a general security mechanism to authorize a network connection between two computer systems. Implementations may include other security mechanisms employing both an account and password, for example (transmitting a user identification and a password provided by a user of said client computer to said server computer).

Page 13

Application/Control Number: 09/664,941

Art Unit: 2184

8. Claims 27 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cardoza et al., U.S. Patent 5,630,049, and further in view of Cowart, <u>Mastering</u> Windows 98.

Referring to claims 27 and 31:

- e. In column 22, lines 34-37, Cardoza et al. disclose that the remote debugger tells the target operating system to execute a series of machine instructions that correspond to the single source code statement (transmitting to said client computer a request for said application program to take an action).
- In column 5, lines 3-60, Cardoza et al. disclose messages sent between the host and target computers. However, Cardoza et al. don't explicitly disclose receiving a graphics file including pixel information for a graphics image displayed on a display screen of said client computer in response to said action displaying said graphics image on a display screen of said server computer. In Chapter 19, Cowart discloses NetMeeting. Further, on pages 18-19 of Chapter 19, Cowart discloses a Whiteboard feature used to draw a picture that the other people in the conference can see. An on pages 19-21 of Chapter 19, Cowart discloses sharing documents and applications where other people you're connected to can see your actions as you use that program, such as editing a document and so forth. It would have been obvious to one of ordinary skill at the time of the invention to include NetMeeting of Cowart into the system of Cardoza et al. A person of ordinary skill in the art would have been motivated to make the modification because NetMeeting is Internet compatible and provides a visual

Art Unit: 2184

interface accessible to all users connected. It enables other users to see what one is doing on his/her computer.

- h. In column 2, lines 42-67, Cardoza et al. teaches repeating the steps multiple times so as to run said application program through a diagnostic sequence. Further, on page 19 of Chapter 19, Cowart discloses sharing applications so that other people you're connected to can see your actions as you use that program, such as editing a document and so forth (repeating (e) through (g) multiple times so as to allow said user of said server computer to interactively debug said application program by transmitting requests for said application program to take certain actions in consideration of graphics images defined in graphics files received from said client computer in response to prior such requests).
- 9. Claims 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cardoza et al., U.S. Patent 5,630,049.

Referring to claim 25:

- In column 21, lines 59-62, Cardoza et al. disclose that in order to maintain and operate a user debugging session to test the target operating system, information that describes the software being tested may reside on either the host or target system (receiving an identification of said application program from said client computer).
- a2 In column 21, lines 59-62, Cardoza et al. teaches receiving information about the software being tested. However, Cardoza et al. don't explicitly disclose

Art Unit: 2184

checking said application program identification against an application program identification list to confirm that a contractual obligation exists to debug said application program. The Examiner takes Official Notice that it is well known in the art of shareware, freeware, and public domain software that the user enters into a contractual agreement with the distributor and receives services based upon this contractual agreement. An example of this is Red Hat Linux. It would have been obvious to one of ordinary skill at the time of the invention to include the concept of a contractual agreement into the system of Cardoza et al. A person of ordinary skill in the art would have been motivated to make the modification because checking for a contractual agreement before debugging prevents unwanted users from using the debugging service.

Referring to claim 26:

- a3 In column 20, lines 56-60, Cardoza et al. disclose that information about the target computer system, such as an incarnation number and the address locations of certain executable code images comprising operating system code, may comprise the RESP_INIT message (transmitting identifications of said client computer to said server computer).
- In column 20, lines 56-60, Cardoza et al. teaches receiving identification of the client computer. However, Cardoza et al. don't explicitly disclose confirming that said client computer is authorized to run said application program by comparing said client computer identification against an authorized client computer identification. The Examiner takes Official Notice that it is well known

Art Unit: 2184

in the art of shareware, freeware, and public domain software that the user enters into a contractual agreement with the distributor and receives services based upon this contractual agreement. An example of this is Red Hat Linux. It would have been obvious to one of ordinary skill at the time of the invention to include the concept of a contractual agreement into the system of Cardoza et al. A person of ordinary skill in the art would have been motivated to make the modification because checking for a contractual agreement before debugging prevents unwanted users from using the debugging service.

Response to Arguments

- 10. Applicant's arguments with respect to claims 1-21 have been considered but are most in view of the new ground(s) of rejection.
- 11. Applicant's arguments filed September 24, 2003 have been fully considered but they are not persuasive.
- 12. On page 16, under the section 1. Rejection of Claims 1-6, 9-11, 22-24, and 28-30 under 35 U.S.C. 102(b), with respect to claim 22, the Applicant argues, "Claim 22 claims the function of '(a) receiving a request from a client computer over the Internet to debug an application program of said client computer,' and such a function is neither taught nor suggested by Cardoza et al. for the same reasons as stated in reference to functions (a) and (b) of amended Claim 1." The Examiner respectfully disagrees. In column 10, lines 12-17, Cardoza et al. disclose that an Ethernet network connection may be used between a host and target computer system (establishing a connection

Art Unit: 2184

between a client computer and a server computer over the Internet). In column 18, lines 61-64, Cardoza et al. disclose that the target operating system is booted and remains in polling mode waiting for messages from the host computer to establish a network connection. Further, in column 19, lines 66-67 continued in column 20, lines 1-8. Cardoza et al. disclose that in establishing an initial network connection, the looping routine, previously described as being included in the target operating system code, may determine that the message received is an NDP initialization request message (CMD_INIT) and calls the appropriate processing routine. Functionally, the CMD_INIT routine initializes or re-initializes a remote debugging session between the host and target computer systems by causing the operating system code to enter into the polling mode by (receiving a request from a client computer to debug an application program). On pages 16 and 17, under the section 1. Rejection of Claims 1-6, 9-11, 22-24, 13. and 28-30 under 35 U.S.C. 102(b), with respect to claims 24 and 30, the Applicant argues, "Claim 24 also states that 'said diagnostic sequence is preprogrammed into a debug program of a server computer,' and therefore, Claim 24 is further believed to be patentable under 35 U.S.C. 102(b) for the additional reasons stated in reference to claim 3." The Examiner respectfully disagrees. In column 19, lines 15-23, Cardoza et al. disclose that the main debugger process may read an entered debug command, syntactically recognize the entered debug command and any parameters, as by searching a list of known debugger commands for the entered debug command, and semantically interpret the entered debug command and its parameters, as by using parsing methods and techniques.

Page 18

Application/Control Number: 09/664,941

Art Unit: 2184

On pages 20 and 21, under the section 2. Rejection of Claims 7, 8, 12-21, 27, 14. 31, and 32-37 under 35 U.S.C. 103(a), with respect to claims 27 and 31, the Applicant argues. "Claim 27 includes '(f) receiving a graphics file including pixel information (emphasis by Applicant) for a graphics image displayed on a display screen of said client computer in response to said action,' and such a function is neither taught for suggested by either Cardoza et al. or Cowart, alone or in combination, for essentially the same reasons as stated in reference to function (h) of Claim 7." The Applicant argues that the Whiteboard feature of Cowart is only object-oriented versus pixeloriented. The Examiner respectfully disagrees. Only one aspect of the Whiteboard is object-oriented. This is evident in Figure 19.11, which shows a screen shot of the Whiteboard that is drawn on with a free hand drawing tool. This type of drawing tool is pixel-oriented, for example the program paintbrush. Further, an object has to have pixel information otherwise it would not be able to be displayed on a computer screen, which has pixels. On page 19, Cowart teaches opening a picture in a drawing or graphics-viewing program and then copying it onto the Whiteboard. In claim 15, the Applicant discloses that the graphics file including pixel information is a GIF, JPEG, or TIF. All of these are pictures that are taught by Cowart as being able to be opened and copied onto the Whiteboard.

Conclusion

15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

Art Unit: 2184

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael C Maskulinski whose telephone number is (703) 308-6674. The examiner can normally be reached on Monday-Friday 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert W Beausoliel can be reached on (703) 305-9713. The fax phone number for the organization where this application or proceeding is assigned is (703) 746-7239.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

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Page 20

Application/Control Number: 09/664,941

Art Unit: 2184